

SEQUENCE LISTING

<110> Thompson, Penny J.
Sheppard, Paul O.

<120> Uses of Human Zven Antagonists

<130> 02-22

<150> 60/416,719
<151> 2002-10-07

<150> 60/416,718
<151> 2002-10-07

<150> 60/434,116
<151> 2002-12-16

<150> 60/433,918
<151> 2002-12-16

<150> to be determined
<151> 2003-10-03

<150> to be determined
<151> 2003-10-03

<160> 29

<170> FastSEQ for Windows Version 4.0

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<212> DNA
<213> *Homo sapiens*

<220>
<221> CDS
<222> (66) . . . (389)

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    Met Arg Ser Leu Cys Cys Ala Pro Leu Leu Leu Leu Leu Leu Leu
    1           5           10          15

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ccg ccg ctg ctg ctc acg ccc cgc gct ggg gac gcc gcc gtg atc acc 158
 Pro Pro Leu Leu Leu Thr Pro Arg Ala Gly Asp Ala Ala Val Ile Thr
 20 25 30

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ggg gct tgt gac aag gac tcc caa tgt ggt gga ggc atg tgc tgt gct 206
Gly Ala Cys Asp Lys Asp Ser Gln Cys Gly Gly Gly Met Cys Cys Ala
35 40 45

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gtc agt atc tgg gtc aag agc ata agg att tgc aca cct atg ggc aaa 254
 Val Ser Ile Trp Val Lys Ser Ile Arg Ile Cys Thr Pro Met Gly Lys
 50 55 60

ctg qga qac aqc tgc cat cca ctg act cat aaa gtt cca ttt ttt aqq 302

Leu Gly Asp Ser Cys His Pro Leu Thr Arg Lys Val Pro Phe Phe Gly
 65 70 75

cgg agg atg cat cac act tgc cca tgt ctg cca ggc ttg gcc tgt tta
 Arg Arg Met His His Thr Cys Pro Cys Leu Pro Gly Leu Ala Cys Leu
 80 85 90 95

cgg act tca ttt aac cga ttt att tgt tta gcc caa aag taatcgctct
 Arg Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln Lys
 100 105

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 aaaaatatgc ggccgccc
 1496

<210> 2

<211> 108

<212> PRT

<213> Homo sapiens

<400> 2

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 20 25 30
 Ala Cys Asp Lys Asp Ser Gln Cys Gly Gly Gly Met Cys Cys Ala Val
 35 40 45
 Ser Ile Trp Val Lys Ser Ile Arg Ile Cys Thr Pro Met Gly Lys Leu
 50 55 60
 Gly Asp Ser Cys His Pro Leu Thr Arg Lys Val Pro Phe Phe Gly Arg
 65 70 75 80
 Arg Met His His Thr Cys Pro Cys Leu Pro Gly Leu Ala Cys Leu Arg
 85 90 95
 Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln Lys
 100 105

<210> 3

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> This degenerate sequence encodes the amino acid
 sequence of SEQ ID NO:2.

<221> misc_feature

<222> (1)...(324)
 <223> n = A,T,C or G

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 gngngngna tgtgytgygc ngtnwsnath tggtnaarw snathmgnat htgyacnccn 180
 atggnaary tngngngayws ntgycayccn ytnacnmgna argtnccntt ytttyggnmgn 240
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 mgnnttyatht gyytngcnca raar 324

<210> 4
 <211> 1409
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (91)...(405)

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 ggcagtgtt tgccttcacc ccaagtgacc atg aga ggt gcc acg cga gtc tca 114
 Met Arg Gly Ala Thr Arg Val Ser 1 5

atc atg ctc ctc cta gta act gtg tct gac tgt gct gtg atc aca ggg 162
 Ile Met Leu Leu Leu Val Thr Val Ser Asp Cys Ala Val Ile Thr Gly
 10 15 20

gcc tgt gag cgg gat gtc cag tgt ggg gca ggc acc tgc tgt gcc atc 210
 Ala Cys Glu Arg Asp Val Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile
 25 30 35 40

agc ctg tgg ctt cga ggg ctg cgg atg tgc acc ccg ctg ggg cgg gaa 258
 Ser Leu Trp Leu Arg Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu
 45 50 55

ggc gag gag tgc cac ccc ggc agc cac aag gtc ccc ttc ttc agg aaa 306
 Gly Glu Glu Cys His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys
 60 65 70

cgc aag cac cac acc tgt cct tgc ttg ccc aac ctg ctg tgc tcc agg 354
 Arg Lys His His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg
 75 80 85

ttc ccg gac ggc agg tac cgc tgc tcc atg gac ttg aag aac atc aat 402
 Phe Pro Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn
 90 95 100

ttt taggcgttg cctggtctca ggatacccac catccttttc ctgagcacag 455
 Phe
 105

cctggatttt tatttctgcc atgaaaccca gctccatga ctctccagt ccctacactg 515
 actaccctga tctctttgt ctgtacca catatgcaca caggcagaca tacctccat 575
 catgacatgg tccccaggct ggcctgagga tgcacagct tgaggctgtg gtgtgaaagg 635
 tggccagct ggttcttcc cctgctcagg ctggcagaga ggtggtaaat ggcagaaagg 695
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ctgtgacctt	ctgcccagaat	tgtcatgcct	ctgaggcccc	ctcttaccac	actttaccag	1115
ttaaccactg	aagcccccac	ttcccacagc	tttccattta	aaatgcaaat	ggtgggtggtt	1175
caatctaattc	tgatattgac	atattagaag	gcaatttaggg	tgtttcctta	aacaactcct	1235
ttccaaggat	cagccctgag	agcaggttgg	tgactttgag	gagggcagtc	ctctgtccag	1295
attgggggtgg	gagcaaggga	cagggagcag	ggcaggggct	gaaaggggca	ctgattcaga	1355
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<210> 5
<211> 105
<212> PRT
<213> Homo sapiens

<400> 5	Met	Arg	Gly	Ala	Thr	Arg	Val	Ser	Ile	Met	Leu	Leu	Leu	Val	Thr	Val
	1				5				10					15		
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					20				25				30			
Gly	Ala	Gly	Thr	Cys	Cys	Ala	Ile	Ser	Leu	Trp	Leu	Arg	Gly	Leu	Arg	
					35			40			45					
Met	Cys	Thr	Pro	Leu	Gly	Arg	Glu	Gly	Glu	Glu	Cys	His	Pro	Gly	Ser	
					50			55			60					
His	Lys	Val	Pro	Phe	Phe	Arg	Lys	Arg	Lys	His	His	Thr	Cys	Pro	Cys	
	65				70			75			80					
Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro	Asp	Gly	Arg	Tyr	Arg	Cys	
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Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe								
					100			105								

<210> 6
<211> 315
<212> DNA
<213> Artificial Sequence

<220>
<223> This degenerate sequence encodes the amino acid sequence of SEQ ID NO:5.

<221> misc_feature
<222> (1)...(315)
<223> n = A,T,C or G

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gn	gn	gn	gn	gn	gn	gn	180
gn	gn	gn	gn	gn	gn	gn	240
gn	gn	gn	gn	gn	gn	gn	300
gn	gn	gn	gn	gn	gn	gn	315

<210> 7
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Peptide linker.

<400> 7

Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
 1 5 10 15

<210> 8

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Motif.

<221> VARIANT

<222> (8)...(8)

<223> Xaa is Asp or Glu.

<221> VARIANT

<222> (9)...(9)

<223> Xaa is Lys or Arg.

<221> VARIANT

<222> (1)...(10)

<223> Xaa = Any Amino Acid

<400> 8

Ala Val Ile Thr Gly Ala Cys Xaa Xaa Asp
 1 5 10

<210> 9

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Motif.

<221> VARIANT

<222> (4)...(4)

<223> Xaa is Gly or Leu.

<221> VARIANT

<222> (5)...(5)

<223> Xaa is Ser or Thr.

<221> VARIANT

<222> (6)...(6)

<223> Xaa is His or Arg.

<221> VARIANT

<222> (12)...(12)

<223> Xaa is any amino acid.

<221> VARIANT

<222> (13)...(13)

<223> Xaa is Lys or Arg.

<221> VARIANT

<222> (15)...(15)

<223> Xaa is any amino acid.

<400> 9

Cys His Pro Xaa Xaa Xaa Lys Val Pro Phe Phe Xaa Xaa Arg Xaa His
 1 5 10 15

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His Thr Cys Pro Cys Leu Pro
20

<210> 10
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Glu-Glu tag

<400> 10
Glu Tyr Met Pro Met Glu
1 5

<210> 11
<211> 249
<212> DNA
<213> Homo sapiens

<400> 11
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agctgccatc cactgactcg taaagttcca tttttgggc ggaggatgca tcacacttgc 180
ccgtgtctgc caggcttggc ctgtttacgg acttcattta accgatttat ttgttttagcc 240
caaaaagtaa 249

<210> 12
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer ZC40821

<400> 12
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cttgtgac 68

<210> 13
<211> 67
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer ZC40813

<400> 13
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taaatcg 67

<210> 14
<211> 249
<212> DNA
<213> Artificial Sequence

<220>
<223> Codon optimized polynucleotide sequence for Zven1

<400> 14
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tcttgcacatc cgctgactcg taaagttccg ttcttcggtc gtcgtatgca tcacacctgt 180
ccgtgcctgc cgggtctggc ttgcctgcgt acctcttca accgttcat ttgcctggct 240
cagaagtaa 249

<210> 15
<211> 79
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer ZC45,048

<400> 15
agtcaatgga tgacaagaat cacccaactt acccatagga gtacaaattc tgatagactt 60
aacccaaata gaaacagca 79

<210> 16
<211> 77
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer ZC45049

<400> 16
ttcttgtcat ccattgacta gaaaggttcc attctttgggt agaaggatgc atcacacttg 60
tccatgtttg ccaggtt 77

<210> 17
<211> 70
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer ZC45050

<400> 17
ttactttga gccaaacaaa tgaatctgtt gaaagaagtt ctc当地acaag ccaaaccctgg 60
caaacatgga 70

<210> 18
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer ZC45051

<400> 18
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atttgggt 68

<210> 19
<211> 65
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer ZC45052

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<211> 1182	
<212> DNA	
<213> Homo sapiens	
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<211> 1155	
<212> DNA	
<213> Homo sapiens	
<400> 22	
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gcaggcatga tgctggctcg cggcatcggt aactttgtt ttatcgctc cctcaccgc 240	
tataagaagt tgcgcacactt caccatctg ctcattgcca acctggccat cttcgacttc 300	
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tgggagcatg gccacactgtcg ctgtgccttcc gtcaactacc tgcgcaccgt ctccctctac 420	
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 atcaggctga agtga 1155

<210> 23
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide primer ZC29463

<400> 23
 ggaattcatg aggagcctgt gctgcgcc 28

<210> 24
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide primer ZC29462

<400> 24
 gctctagacc cttttggct aaacaaataa a 31

<210> 25
 <211> 348
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Expression sequence

<400> 25
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 ggtggaggca tggctgtgc tggcgtatc tgggtcaaga gcataaggat ttgcacacct 180
 atgggcaaac tgggagacag ctgcccattca ctgactcgta aagttccatt ttttggcgg 240
 agatgcattc acacttgccc gtgtctgcca ggcttggcct gtttacggac ttcatttaac 300
 cgatttattt gtttagccca aaagggtcta gaatacatgc cgatggac 348

<210> 26
 <211> 116
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Expression sequence with Gly linker and
 Glu-Glu-tag

<400> 26
 Met Arg Ser Leu Cys Cys Ala Pro Leu Leu Leu Leu Leu Pro
 1 5 10 15
 Pro Leu Leu Leu Thr Pro Arg Ala Gly Asp Ala Ala Val Ile Thr Gly
 20 25 30
 Ala Cys Asp Lys Asp Ser Gln Cys Gly Gly Gly Met Cys Cys Ala Val
 35 40 45

Ser Ile Trp Val Lys Ser Ile Arg Ile Cys Thr Pro Met Gly Lys Leu
 50 55 60
 Gly Asp Ser Cys His Pro Leu Thr Arg Lys Val Pro Phe Phe Gly Arg
 65 70 75 80
 Arg Met His His Thr Cys Pro Cys Leu Pro Gly Leu Ala Cys Leu Arg
 85 90 95
 Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln Lys Gly Leu Glu Tyr
 100 105 110
 Met Pro Met Asp
 115

<210> 27
 <211> 393
 <212> PRT
 <213> Homo sapiens

<400> 27
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 Thr Ser Phe Leu Ser Val Leu Asn Pro His Gly Ala His Ala Thr Ser
 20 25 30
 Phe Pro Phe Asn Phe Ser Tyr Ser Asp Tyr Asp Met Pro Leu Asp Glu
 35 40 45
 Asp Glu Asp Val Thr Asn Ser Arg Thr Phe Phe Ala Ala Lys Ile Val
 50 55 60
 Ile Gly Met Ala Leu Val Gly Ile Met Leu Val Cys Gly Ile Gly Asn
 65 70 75 80
 Phe Ile Phe Ile Ala Ala Leu Val Arg Tyr Lys Lys Leu Arg Asn Leu
 85 90 95
 Thr Asn Leu Leu Ile Ala Asn Leu Ala Ile Ser Asp Phe Leu Val Ala
 100 105 110
 Ile Val Cys Cys Pro Phe Glu Met Asp Tyr Tyr Val Val Arg Gln Leu
 115 120 125
 Ser Trp Glu His Gly His Val Leu Cys Thr Ser Val Asn Tyr Leu Arg
 130 135 140
 Thr Val Ser Leu Tyr Val Ser Thr Asn Ala Leu Leu Ala Ile Ala Ile
 145 150 155 160
 Asp Arg Tyr Leu Ala Ile Val His Pro Leu Arg Pro Arg Met Lys Cys
 165 170 175
 Gln Thr Ala Thr Gly Leu Ile Ala Leu Val Trp Thr Val Ser Ile Leu
 180 185 190
 Ile Ala Ile Pro Ser Ala Tyr Phe Thr Thr Glu Thr Val Leu Val Ile
 195 200 205
 Val Lys Ser Gln Glu Lys Ile Phe Cys Gly Gln Ile Trp Pro Val Asp
 210 215 220
 Gln Gln Leu Tyr Tyr Lys Ser Tyr Phe Leu Phe Ile Phe Gly Ile Glu
 225 230 235 240
 Phe Val Gly Pro Val Val Thr Met Thr Leu Cys Tyr Ala Arg Ile Ser
 245 250 255
 Arg Glu Leu Trp Phe Lys Ala Val Pro Gly Phe Gln Thr Glu Gln Ile
 260 265 270
 Arg Lys Arg Leu Arg Cys Arg Arg Lys Thr Val Leu Val Leu Met Cys
 275 280 285
 Ile Leu Thr Ala Tyr Val Leu Cys Trp Ala Pro Phe Tyr Gly Phe Thr
 290 295 300
 Ile Val Arg Asp Phe Phe Pro Thr Val Phe Val Lys Glu Lys His Tyr
 305 310 315 320
 Leu Thr Ala Phe Tyr Ile Val Glu Cys Ile Ala Met Ser Asn Ser Met
 325 330 335
 Ile Asn Thr Leu Cys Phe Val Thr Val Lys Asn Asp Thr Val Lys Tyr
 340 345 350

Phe Lys Lys Ile Met Leu Leu His Trp Lys Ala Ser Tyr Asn Gly Gly
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 Lys Ser Ser Ala Asp Leu Asp Leu Lys Thr Ile Gly Met Pro Ala Thr
 370 375 380
 Glu Glu Val Asp Cys Ile Arg Leu Lys
 385 390

<210> 28
 <211> 384
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Ala Ala Gln Asn Gly Asn Thr Ser Phe Thr Pro Asn Phe Asn Pro
 1 5 10 15
 Pro Gln Asp His Ala Ser Ser Leu Ser Phe Asn Phe Ser Tyr Gly Asp
 20 25 30
 Tyr Asp Leu Pro Met Asp Glu Asp Glu Asp Met Thr Lys Thr Arg Thr
 35 40 45
 Phe Phe Ala Ala Lys Ile Val Ile Gly Ile Ala Leu Ala Gly Ile Met
 50 55 60
 Leu Val Cys Gly Ile Gly Asn Phe Val Phe Ile Ala Ala Leu Thr Arg
 65 70 75 80
 Tyr Lys Lys Leu Arg Asn Leu Thr Asn Leu Leu Ile Ala Asn Leu Ala
 85 90 95
 Ile Ser Asp Phe Leu Val Ala Ile Ile Cys Cys Pro Phe Glu Met Asp
 100 105 110
 Tyr Tyr Val Val Arg Gln Leu Ser Trp Glu His Gly His Val Leu Cys
 115 120 125
 Ala Ser Val Asn Tyr Leu Arg Thr Val Ser Leu Tyr Val Ser Thr Asn
 130 135 140
 Ala Leu Leu Ala Ile Ala Ile Asp Arg Tyr Leu Ala Ile Val His Pro
 145 150 155 160
 Leu Lys Pro Arg Met Asn Tyr Gln Thr Ala Ser Phe Leu Ile Ala Leu
 165 170 175
 Val Trp Met Val Ser Ile Leu Ile Ala Ile Pro Ser Ala Tyr Phe Ala
 180 185 190
 Thr Glu Thr Val Leu Phe Ile Val Lys Ser Gln Glu Lys Ile Phe Cys
 195 200 205
 Gly Gln Ile Trp Pro Val Asp Gln Gln Leu Tyr Tyr Lys Ser Tyr Phe
 210 215 220
 Leu Phe Ile Phe Gly Val Glu Phe Val Gly Pro Val Val Thr Met Thr
 225 230 235 240
 Leu Cys Tyr Ala Arg Ile Ser Arg Glu Leu Trp Phe Lys Ala Val Pro
 245 250 255
 Gly Phe Gln Thr Glu Gln Ile Arg Lys Arg Leu Arg Cys Arg Arg Lys
 260 265 270
 Thr Val Leu Val Leu Met Cys Ile Leu Thr Ala Tyr Val Leu Cys Trp
 275 280 285
 Ala Pro Phe Tyr Gly Phe Thr Ile Val Arg Asp Phe Phe Pro Thr Val
 290 295 300
 Phe Val Lys Glu Lys His Tyr Leu Thr Ala Phe Tyr Val Val Glu Cys
 305 310 315 320
 Ile Ala Met Ser Asn Ser Met Ile Asn Thr Val Cys Phe Val Thr Val
 325 330 335
 Lys Asn Asn Thr Met Lys Tyr Phe Lys Lys Met Met Leu Leu His Trp
 340 345 350
 Arg Pro Ser Gln Arg Gly Ser Lys Ser Ser Ala Asp Leu Asp Leu Arg
 355 360 365
 Thr Asn Gly Val Pro Thr Thr Glu Glu Val Asp Cys Ile Arg Leu Lys
 370 375 380

1

<210> 29
<211> 129
<212> PRT
<213> Homo sapiens

<400> 29
Met Arg Ser Leu Cys Cys Ala Pro Leu Leu Leu Leu Leu Pro
1 5 10 15
Pro Leu Leu Leu Thr Pro Arg Ala Gly Asp Ala Ala Val Ile Thr Gly
20 25 30
Ala Cys Asp Lys Asp Ser Gln Cys Gly Gly Met Cys Cys Ala Val
35 40 45
Ser Ile Trp Val Lys Ser Ile Arg Ile Cys Thr Pro Met Gly Lys Leu
50 55 60
Gly Asp Ser Cys His Pro Leu Thr Arg Lys Asn Asn Phe Gly Asn Gly
65 70 75 80
Arg Gln Glu Arg Arg Lys Arg Lys Arg Ser Lys Arg Lys Lys Glu Val
85 90 95
Pro Phe Phe Gly Arg Arg Met His His Thr Cys Pro Cys Leu Pro Gly
100 105 110
Leu Ala Cys Leu Arg Thr Ser Phe Asn Arg Phe Ile Cys Leu Ala Gln
115 120 125
Lys